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| 10/058,960 | 01/30/2002 | Masahiko Yahagi | Q68321 | 4641 |

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| EXAMINER |
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PHAN, HUY Q

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| ART UNIT | PAPER NUMBER |
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2685

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,960

Applicant(s)

YAHAGI, MASAHIKO

Examiner

Huy Q Phan

Art. Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2002.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-19 is/are rejected.
7) ☒ Claim(s) 15 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 15 is objected to because of the following informalities: in line 12, "y" should be changed to - -by- -.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-5, 7-9, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Rahman et al. (US-6,101,379).

Regarding claim 1, Rahman et al. disclose in figure 2, a method of establishing a connection to a desired communications network, comprising the steps of:

 sending a request signal to each of a plurality of communications networks (col. 3, lines 44-55 and fig. 2, feature 19);

 receiving response signals from said communications networks (col. 4, lines 18-24 and fig. 2, feature 21);

 indicating the received response signals (col. 4, lines 24-26);

allowing a user to select one of said plurality of networks based on the indicated response signals (col. 4, lines 29-30); and

establishing a connection to the selected communications network (col. 4, lines 27-30).

Regarding claim 3, Rahman et al. disclose a method as recited in the rejection of claim 1, wherein said response signal indicates information concerning a communication service of each of said communications networks (col. 4, lines 6-39).

Regarding claim 4, Rahman et al. disclose a method as recited in the rejection of claim 3, wherein said information indicates tariff of each of said communications networks (col. 4, lines 6-39).

Regarding claim 5, Rahman et al. disclose a communication terminal comprising:
a network interface for sending a request signal to each of a plurality of communications networks and for receiving response signals from said communications networks (col. 3, lines 44-51); and

a user interface for indicating the received response signals (col. 4, lines 24-25) to allow a user to enter a command signal based on the indicated response signals and selecting one of said plurality of networks according to the entered command signal (col. 4, lines 29-30); and

said network interface establishing a connection to one of said plurality of networks which is selected by said user interface (col. 4, lines 27-30).

Regarding claim 7, Rahman et al. disclose a communication terminal as recited in the rejection of claim 5, wherein said response signal indicates information concerning a communication service of each of said communications networks (col. 4, lines 6-39).

Regarding claim 8, Rahman et al. disclose a communication terminal as recited in the rejection of claim 7, wherein said information indicates tariff of each of said communications networks (col. 4, lines 6-39).

Regarding claim 9, Rahman et al. disclose a communication system comprising:
a plurality of wireless networks (fig. 2, boxes 20, 22, 24), each of the wireless networks producing a response signal upon receipt of a request signal (col. 3, lines 51-55; col. 4, lines 18-25); and

a wireless terminal comprising:

a wireless interface (inherently to key and display on mobile terminal; see col. 3, lines 49-51 and col. 4, lines 24-30) for sending said request signal to each of said plurality of wireless networks and for receiving response signals from said wireless networks (col. 3, line 44-col. 4, line 30);

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a user interface (inherently to key and display on mobile terminal; see col. 3, lines 49-51 and col. 4, lines 24-30) for indicating the received response signals, allowing a user to enter a command signal based on the indicated response signals and selecting one of said wireless networks according to the entered command signal, said wireless interface establishing a connection to one of said wireless networks which is selected by said user interface (col. 3, line 44-col. 4, line 30).

Regarding claim 11, Rahman et al. disclose a communication system as recited in the rejection of claim 9, wherein said response signal indicates information concerning a communication service of each of said communications networks (col. 4, lines 6-39)

Regarding claim 12, Rahman et al. disclose a communication system as recited in the rejection of claim 11, wherein said information indicates tariff of each of said networks (col. 4, lines 6-39).

4. Claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Bender et al. (US-2002/0132622).

Regarding claim 16, Bender et al. disclose a method of establishing a connection to a selected network, comprising the steps of:

receiving, at a first communications network, a connection request from a user terminal [0016];

sending a request signal from said first communications network to a traffic management center if said connection request encounters a traffic congestion [0016]; and

sending a rerouting message from the center to said user terminal via said first communications network for identifying a second communications network whose congestion level is lower than a predefined threshold level to thereby allow a user to send a connection request to said second communications network ([0016] and [0026]-[0030]).

5. Claims 18 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kukkohovi (US-6,119,003).

Regarding claim 18, Kukkohovi discloses a communication system comprising:
a traffic management center (inherently to system operator; see col. 5, lines 34-44); and

a plurality of communications networks, a first one of the communications networks receiving a connection request from a user terminal and sending a request signal to said traffic management center when a traffic congestion is encountered in said first communications network and receiving a rerouting message from said center, and sending the received rerouting message to said user terminal to allow a user to establish a connection to a network identified by the rerouting message, said traffic management center responding to said request signal by returning said rerouting message to said first communications network, the rerouting message identifying a

second one of said networks whose congestion level is lower than a predefined threshold level (col. 5, lines 17-44; col. 3, lines 60-67 and col. 7, line 39-col. 8, line 59).

Regarding claim 19, Kukkohovi discloses a communication system as recited in the rejection of claim 18, wherein said second one of the networks has a least routing cost (col. 5, lines 24-34).

- Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rahman et al. in view of Kukkohovi (US-6,119,003).

Regarding claims 2, 6 and 10, Rahman et al. disclose a method, a communication terminal and a communication system as recited in the rejections of claims 1, 5 and 9 respectively. But, Rahman et al. fail to expressly teach wherein said response signal indicates traffic congestion level of each of said communications networks. However in analogous art, Bender et al. teach wherein said response signal indicates traffic congestion level of each of said communications networks [0016]. Since, Rahman et al. and Bender et al. are related to the method of handoff in multi-network communications system; therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify the system of Rahman et al. by specifically having wherein said response signal indicates traffic congestion level of each of said communications networks as taught by Bender et al. for purpose of using advantageously handover technique when communication signals being transmitted fall below a critical level during a call in order to maintain continuously the quality and reliability of wireless communication.

8. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rahman et al. in view of Bender et al. (US-2002/0132622).

Regarding claim 13, Rahman et al. disclose a method of performing a handover operation, comprising the steps of: sending a request signal to each of a plurality of wireless networks (col. 4, lines 18-24 and fig. 2, feature 21, boxes 20, 22, 24); receiving a response signal from each of said plurality of wireless networks (col. 4, lines 18-24 and fig. 2, feature 21); selecting one of said plurality of wireless networks based on response signals received from said wireless networks (col. 4, lines 29-30); and establishing a connection to the selected wireless network (col. 4, lines 27-30).

But, Rahman et al. do not particularly show sending a handover request signal to each of a plurality of wireless networks and response signal indicating traffic congestion level of each of said communications networks. However in analogous art, Bender et al. teach sending a handover request signal to each of a plurality of wireless networks and response signal indicating traffic congestion level of each of said communications networks ([0016] and [0026]-[0030]). Since, Rahman et al. and Bender et al. are related

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to the method of handoff in multi-network communications system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Rahman et al. by specifically having wherein said response signal indicates traffic congestion level of each of said communications networks as taught by Bender et al. for purpose of using advantageously handover technique when communication signals being transmitted fall below a critical level during a call in order to maintain continuously the quality and reliability of wireless communication.

Regarding claim 14, Kukkohovi discloses a mobile terminal comprising:

a wireless interface (inherently to key and display on mobile terminal; see col. 3, lines 49-51 and col. 4, lines 24-30) for sending a request signal to each of a plurality of wireless networks and receiving a response signal from each of said plurality of wireless networks (col. 3, line 44-col. 4, line 30); and

control circuitry for selecting one of said plurality of wireless networks based on the response signals received from said networks (inherently to col. 4, lines 26-30), said wireless interface establishing a connection to the wireless network selected by the control circuitry (col. 4, lines 26-30).

But, Rahman et al. do not explicitly recite sending the handover request signal and the response signal of each wireless network indicating traffic congestion level of the network. However, Bender et al. teach sending the handover request signal and the response signal of each wireless network indicating traffic congestion level of the network ([0016] and [0026]-[0030]). Since, Rahman et al. and Bender et al. are related

to the method of handoff in multi-network communications system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Rahman et al. by specifically sending the handover request signal and the response signal of each wireless network indicating traffic congestion level of the network as taught by Bender et al. for purpose of using advantageously handover technique when communication signals being transmitted fall below a critical level during a call in order to maintain the quality and reliability of wireless communication.

Regarding claim 15, Rahman et al. disclose a communication system comprising: a plurality of wireless networks (fig. 2, boxes 20, 22, 24), each of said networks producing a response signal upon receipt of a signal from said wireless network (col. 3, lines 51-55; col. 4, lines 18-25); and a wireless terminal comprising: a wireless interface (inherently to key and display on mobile terminal; see col. 3, lines 49-51 and col. 4, lines 24-30) for a signal to said wireless networks and receiving said response signals from said wireless networks (col. 3, line 44-col. 4, line 30); and control circuitry for selecting one of said wireless networks based on the received response signals (inherently to col. 4, lines 26-30), said wireless interface establishing a connection to one of said wireless networks which is selected by said control circuitry (col. 4, lines 26-30).

But, Rahman et al. fail to expressly teach wherein the response signal upon receipt of a handover request signal, which indicates traffic congestion level of the network. However, Bender et al. teach wherein the response signal upon receipt of a

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handover request signal, which indicates traffic congestion level of the network ([0016] and [0026]-[0030]). Since, Rahman et al. and Bender et al. are related to the method of handoff in multi-network communications system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Rahman et al. by specifically having wherein the response signal indicates traffic congestion level of each of said communications networks as taught by Bender et al. for purpose of using advantageously handover technique when communication signals being transmitted fall below a critical level during a call in order to maintain continuously the quality and reliability of wireless communication.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bender et al. in view of Kukkohovi (US-6,119,003).

Regarding claim 17, Bender et al. disclose a method as recited in the rejection of claim 16. But, Bender et al. do not particularly show wherein said second communications network has a least routing cost. However in analogous art, Kukkohovi discloses wherein said second communications network has a least routing cost (col. 5, lines 24-59). Since, Bender et al. and Kukkohovi are related to the method of handoff in multi-network communications system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bender et al. by specifically having wherein said second communications network has a least routing cost as taught by Kukkohovi for purpose of providing wireless

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communication system advantageously a function of selecting the network, which offers a lowest cost.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Dunn et al. (US-6,591,103) disclose a method for carrier selection.
- b) Erlick et al. (US-6,614,769) disclose handover between networks.
- c) Guilford et al. (US-2002/0087674) disclose network selection.
- d) Vazvan et al. (US-6,400,946) disclose multiplemode universal mobile communication systems.
- e) Whinnett et al. (US-5,983,092) disclose system selection.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy Q Phan whose telephone number is 703-305-9007. The examiner can normally be reached on 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Urban F Edward can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phan, Huy Q

AU : 2685

Date : Aug. 06, 2004


NICK CORSARO
PRIMARY EXAMINER